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FAUNISTIC NOTE

Trigonalyoidea (Hymenoptera: Apocrita) – a new superfamily of wasps recorded in Romania

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Abstract

The superfamily Trigonalyoidea, along with the species *Pseudogonalos hahnii* (Spinola, 1840), is recorded for the first time in Romania. An up-to-date distribution in Europe and a brief description of its biology is presented, together with a picture of the specimen collected in Romania.

Keywords

distribution, Europe, hyperparasitism, Insecta, trigonalyids.

Trigonalyoidea is a small superfamily of parasitic wasps, comprising 16 genera and around 120 species, all belonging to a single family – Trigonalyidae (Chen et al. 2020). Various authors spell the name of the family either as Trigonalidae or Trigonalyidae, but the latter is used here (for details see the paper of Engel and Lelej 2020).

The distribution of Trigonalyidae is a cosmopolitan one (aside from alpine and arctic zones), with a maximum number of species occurring in the tropics. Europe has only one species, namely *Pseudogonalos hahnii* (Spinola, 1840) (Fig. 1), which is also present in Asia (China, Kazakhstan, Mongolia and Siberia). In Europe, P. hahnii is known from Belgium, Czech Republic, Estonia, Finland, France, Germany, Greece, Italy, Latvia, Lithuania, the Netherlands, Poland, Russia, Slovakia, Switzerland, Ukraine and the United Kingdom (Väänänen et al. 2018). Although the species is known from most of the European countries, it appears to be collected only in small numbers, being relatively rare (Broad 2016; Väänänen et al. 2018). This scarcity of

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Figure 1. *Pseudogonalos hahnii* (Spinola, 1840), habitus of the specimen collected in Romania.

records can be partially explained by the very short life span of the adults, which seems to be at most eight days (Carmean 1991).

Pseudogonalos hahnii was found to be a eurytopic species, being collected in both xerothermous and moist habitats (Schnee 2011).

The trigonalyids have a very interesting biology. The female of *Pseudogonalos hahnii* lays thousands of tiny eggs on various plants (*Artemisia vulgaris* L., *Epilobium angustifolium* L., *Phragmites australis* (Cav.) Trin. ex Steud., *Pinus* sp., Poaceae, *Prenanthes purpurea* L., *Pteridium aquilinum* (L.) Kuhn, *Rubus* sp., *Urtica dioica* L., *Vaccinium myrtillus* L., etc), which needs to be consumed by a secondary host (sawfly or lepidoptera larvae) in order to hatch (Väänänen et al. 2018). It was shown that the ovarioles of *Pseudogonalos hahnii* can contain more than 10.000 eggs and it can lay more than 1000 eggs per day in laboratory conditions (Bischoff 1936). After hatching in the secondary host gut, trigonalyid larva searches for its primary host, which is represented by Ichneumonidae larvae (Insecta: Hymenoptera), in the case of *Pseudogonalos hahnii* (Väänänen et al. 2018). The known species of both primary and secondary hosts of *Pseudogonalos hahnii* are summarized in Väänänen et al. (2018).

Material examined: Romania: 1 specimen (♀); Bacău county, Comănești; 46.4286°N/26.4399°E; 472 m alt.; 15 June 2020; Pintilioaie Alexandru-Mihai leg. The specimen was collected from herbaceous vegetation using a sweeping net and is preserved in the personal collection of the author, housed in Iași, Romania.

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